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Investigation into the Feasibility of
Establishing a Uniform System
for the Collection of
International Trade and Marine Shipping Statistics

F I N A L
R E P O R T

April 1983

Investigation into the Feasibility of
Establishing a Uniform System
for the Collection of
International Trade and Marine Shipping Statistics

A project sponsored jointly by the External Trade
and Transportation and Communications Divisions
of Statistics Canada

FINAL REPORT
OF THE
WORKING GROUP

April 1983

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INTRODUCTION

1. Background

For a number of years, governmental and private organizations interested in statistics on international cargo movements have been studying means to integrate more detailed commodity coverage with cargo/carrier statistical information. All studies conducted have led to the conclusion that the creation of a data base using the information already captured by Statistics Canada from Revenue Canada's transport and trade documents offered the greatest potential to meet users' needs while reducing paperburden and eliminating inconsistencies and duplication.

The collection of shipping statistics has been carried out independently of the compilation process for trade statistics due to the lack of resources. The Transportation and Communications Division of Statistics Canada has implemented a new data base for international shipping statistics using information from the A 6 General Declaration and attachments. It is felt that recent developments in computerized data capture facilities at both Customs and Statistics Canada have created an environment favourable to the development and implementation of a data integration program.

On October 23, 1981, Mr. Chu of the United Nations requested Canada's participation in the implementation of a world-wide Uniform System for the collection and dissemination of economic statistics of shipping activities. In addition, Mr. Svein Nordbotten, Director of the Statistical Office of the United Nations, noted in his letter of October 29, 1981 to Mr. Guy Leclerc that "the basic principle of the system is the linking of the commodities recorded on Customs documentation with the ship's movement records".

Most data elements required for the integration process are already available at Statistics Canada but the final formulation of this program will necessitate the participation of Systems Development, External Trade and Transportation and Communications Divisions of Statistics Canada as well as officers from Revenue Canada, Customs and Excise.

2. Working Group

To investigate the feasibility of establishing an integrated program, a Working Group was set up, composed of the following members:

Mel Long	Team Leader, External Trade Division
June Forgie	Transportation and Communications Division
Lina Di Piédro	Transportation and Communications Division
Robert Jubainville	External Trade Division
Michel Labonté	External Trade Division

3. Steering Committee

To direct and monitor studies of the Working Group and to submit a final report to the ACS Economic Statistics, a Trade-Marine Steering Committee was formed. Its members are as follows:

G. E. Clarey	Chairman, External Trade Division
B. J. Slater	Transportation and Communications Division
B. Nemes	Transportation and Communications Division
S. Mozes	Transportation and Communications Division
M. C. Lapointe	External Trade Division

4. Terms of Reference of the Working Group

a) Mandate

The mandate of the Working Group was to examine the possibilities for integration of the Trade/Marine data systems.

b) Objectives

The objectives of the Working Group were:

- (1) to determine the feasibility of such integration;
- (2) to evaluate possible strategies for achieving such integration, and
- (3) to report its conclusions and recommendations to the Trade-Marine Steering Committee.

c) Scope

In the course of its investigation the Working Group was expected to:

- (1) determine the present demand for Marine/Trade data;
- (2) identify the existing supply of such data;
- (3) make an analytical comparison of the demand and supply;
- (4) examine possible methods of integrating the Trade Statistics system and the Marine Statistics system to satisfy the identified demand, and
- (5) determine the feasibility and desirability of identified options.

d) Activities

Major activities pursued by the Working Group were:

- (1) a comparison of the conceptual frameworks of the two programs, with special attention to the concepts and definitions used;
- (2) identification of the basic components, or data elements, presently captured in each program, and assessment of their commonalities, compatibility and quality;
- (3) identification of the basic components of the consolidated data demand;
- (4) identification of information gaps by a comparison of the perceived supply and demand;
- (5) identification of existing and possible sources of the missing information;
- (6) identification of ways and means of capturing the required information in an integrated system, and
- (7) preparation of a summary report on the Group's findings and recommendations on possible approaches.

5. References

Among the documents reviewed by the Working Group were:

- (1) Functional Specifications of the Cargo Control System (extract)
- (2) Water Transport Statistics Report - (June 7, 1974)
- (3) Interim Report on the Development of a Water Transportation Information System (May 7, 1974)
- (4) Pilot Project on International Water Transport Statistics (1976)
- (5) Discussion Paper - International Shipping Statistics:
Development of a New Data Base (December 1976)
- (6) Proposals and Recommendations on the Development of a New Data Base for International Shipping Statistics (May 1977)
- (7) The "Chu" Report: - A Paper prepared for presentation in a research seminar of Canadian Transport Commission, held in Ottawa, Canada October 22, 1981.
- (8) Letter of October 29, 1981 from Mr. Svein Nordbotten of the United Nations to Mr. Guy Leclerc of Statistics Canada.

CHAPTER I
CONCEPTUAL FRAMEWORKS

A. The Conceptual Framework of the Trade Statistics Program

1. Mandate and Objectives of the External Trade Division

(a) Mandate

The mandate of External Trade Division is to produce and publish timely and accurate statistics on the international merchandise trade activities of the country.

(b) Objectives of the Trade Statistics Program

- (1) To produce and publish consistent, integrated and timely estimates of Canada's merchandise imports and exports by partner country and by commodity.
- (2) To measure, in both current-dollar and constant dollar terms, the movements of goods into and out of Canada, thus adding to or subtracting from the stock of material wealth available in Canada.
- (3) To compile international trade statistics in a commodity classification system compatible to the systems of classification used for production, transportation and domestic trade statistics as well as being consistent with the conceptual framework of the Balance of Payments and the National Economic Accounts.
- (4) To compile import and export statistics as comparable as possible with other countries' import and export statistics.

2. Present Output

(a) Publications

Monthlies, Quarterlies, Annuals

- (1) Preliminary Statement of Canadian Trade - Monthly
- (2) Summary of External Trade - Monthly
- (3) Exports by Countries - Quarterly
- (4) Exports by Commodities - Monthly
- (5) Imports by Countries - Quarterly

- (6) Imports by Commodities - Monthly
- (7) Exports Merchandise Trade - Annual
- (8) Imports Merchandise Trade - Annual
- (9) Imports Merchandise Trade Commodity Detail - Annual

Occasionals

- (1) Trade of Canada Commodity Classification (1975)
- (2) The 1971 - Based Price and Volume Indexes of Canada's External Trade. Supplement
- (3) Canadian International Trade Classification: Reference Manual

Note: Content of the above publications is described in Appendix A.

(b) Unpublished

Tables, tapes and/or microfiches of Canadian Trade are available on demand.

Data showing quantity and value can be provided for certain elements such as C.I.T.C. (Canadian International Trade Classification), M.C.C. (Import Commodity Classification), X.C.C. (Export Commodity Classification) or S.I.T.C. (Standard International Trade Classification); but only value is shown for the remaining data elements since the quantities captured are not uniform at these levels.

Listed below are a few sample combinations of data available.

- X.C.C. by mode of transport
- M.C.C. by mode of transport
- X.C.C. by geographic regions
- M.C.C. by geographic regions

(c) Detailed Records

Revenue Canada has access to detailed records for both Imports and Exports while the Tariff Board and the Import Analysis Branch of Regional Industrial Development, under authorization, may obtain detailed information on Imports only.

(d) Availability of Data

Preliminary External Trade data are released to the public approximately five weeks after the end of the reference month, according to a schedule established at the beginning of each year. Final data are available approximately one to two weeks after the preliminary release.

3. Release Policy

Legal Framework:

By virtue of paragraph 16(3)(a) of the **Statistics Act**, "information collected by persons, organizations or departments for their own purposes and communicated to Statistics Canada shall be subject to the same secrecy requirements to which it was subject when collected and may only be disclosed by Statistics Canada in the manner and to the extent agreed upon by the collector thereof and the Chief Statistician".

Release of otherwise confidential information up to the agreed-upon limits falls under the discretionary power of the Chief Statistician.

Under the **Customs Act**, the invoice is confidential.

Guidelines

Statistics Canada is prevented by law from disclosing information about the activities of individual firms, except under specific conditions.

Imports

In 1981, Revenue Canada, as the original collector of import documentation by virtue of the Customs Act, agreed to grant authority to Statistics Canada to disclose or publish detailed import statistics without suppression of value or volume data. The terms of the agreement may be summarized as follows:

- (a) Statistics Canada may disclose or publish, in any detail in tabular form, import statistics derived from Customs documents notwithstanding that the data in any disclosed or published cell may be related to an individual importer.
- (b) Statistics Canada shall not publish or make available the names and addresses of either Canadian importers or foreign exporters without the written permission in each case of the Deputy Minister Customs and Excise or his designate.

A revised import disclosure policy based on this agreement became effective on December 1, 1981.

Exports

For exports, disclosure in published and unpublished data can only be prevented by limiting the amount of cross-tabulations. The general directive followed in response to requests for unpublished data provides for the availability of:

- (a) on a **monthly** basis, single-variable totals or one cross-classification;

- (b) on a **quarterly** basis, up to two cross-classifications;
- (c) on an **annual** basis, up to three cross-classifications;
- (d) more cross-classifications at higher levels of aggregation;
- (e) cross-classification of the port of clearance with the process code (domestic or re-export) but not with any other dimension.

Requests for cross-tabulations that fall outside the parameters of the general guidelines can be authorized by an order from the Chief Statistician.

4. Framework

Universe

International Merchandise Trade includes all goods which add to or subtract from the stock of material resources in Canada as a result of their movement across the Canadian border.

A **Customs Port** is a location designated by Revenue Canada, Customs and Excise, for the declaration of goods.

Imports include all inward-bound goods which cross Canada's geographical boundary.

Domestic Exports include all outward movements of goods grown, extracted or manufactured in Canada.

Re-exports are exports of goods of foreign origin which have not been materially transformed in Canada.

Total exports are the sum of domestic exports and re-exports.

Examples of **exclusions** from Trade Statistics are:

- (1) Exports to Canadian diplomats or military posts abroad
- (2) Imports by foreign diplomats or military posts in Canada
- (3) Tourist purchases
- (4) Settlers' effects
- (5) Purchase or sale of bunker supplies and stores for ships or aircraft
- (6) Goods for convenience of transportation (in transit)

Note: The underlined types of transactions are recorded in "non-trade".

Sources

International Merchandise Trade data are compiled from administrative documents collected at ports across Canada by Revenue Canada, Customs and Excise. Titles of forms and content descriptions of tapes and summaries are listed and outlined in Appendix B.

Other Bureau divisions and Government agencies report on specific activities such as trade in electricity, and exports of crude petroleum and natural gas. The Canadian Wheat Board reports on exports of grain.

Reference Period

The statistical month is defined as the calendar month: however, five working days are allowed for the transmittal of documents from Customs.

Classification:

Imports use the structure of the Canadian International Trade Classification (C.I.T.C.), which corresponds to the Standard Commodity Classification (S.C.C.).

Exports use the structure of the Export Commodity Classification (X.C.C.) which is based on the Standard Commodity Classification (S.C.C.).

For both classifications, weight and number are the most commonly used units of measurement, since at least one of these is normally available for each export or import shipment.

B. The Conceptual Framework of the Marine Statistics Program

1. Mandate and Objectives

The **mandate** of the Transportation and Communications Division is to produce, publish or otherwise make available consistent, integrated, comprehensive and timely "statistical information" on all modes of transport, transportation infrastructures and communications according to the essential requirements of the Division's customers.

Marine Transport produces, publishes and otherwise makes available statistics relating to marine transport in Canada, including the Canadian Water Transport Industry and traffic, both coastwise and international, involving Canadian ports.

The **objectives** of the International Marine Statistics Program are:

- (1) To provide, in aggregate and in detail, statistics on:
 - (a) ship operations, traffic patterns and tonnage of cargo handled at Canadian ports in international trade.
 - (b) the movement of goods internationally through Canadian ports
 - (i) by ports of loading and unloading
 - (ii) in relation to each vessel entering or leaving established port or harbour limits.
- (2) To develop a vessel data bank containing static information on ships entering or leaving Canadian ports on international service.
- (3) To develop a commodity origin-destination data base for international shipping, using Revenue Canada Customs documentation, for publication and for use within Government.

2. Output

(a) Publications

International Seaborne Shipping Statistics - Quarterly

Statistics on commodities carried by marine transport in international seaborne shipping in Canadian coastal waters, the Great Lakes and St. Lawrence Seaway. Beginning with first quarter 1982 data, this publication will replace the quarterly "International Vessel Traffic Statistics", which shows type of cargo.

International Seaborne Shipping Commodity Statistics - Annual

Statistics on commodities carried by marine transport in international seaborne shipping in Canadian coastal waters, the Great Lakes and St. Lawrence Seaway. Beginning with the 1980 reference year, this publication will replace the annual "International Vessel Traffic Statistics", which shows type of cargo.

International Seaborne Shipping Port Statistics - Annual

Statistics on cargo tonnes handled and the number and size of the vessels arriving and departing from Canadian ports in international seaborne shipping, by handling port. First issue, 1980 reference year.

Water Transport Service Bulletin

A statistical service to industry, government and other users consisting of early release of summary data on shipping activity, including port activity, major commodities loaded and unloaded and container movements.

(b) Unpublished

Tables, showing cargo tonnes handled at Canadian ports in international shipping by up to four of: commodity, handling port, foreign origin and destination, nationality of vessel, Canadian region. The system generates totals for one specified variable and sub-totals for up to two other variables. If desired, the data may be provided in rank order of any one of the first four variables listed above.

(c) Detailed records

Transport Canada, Canadian Transport Commission and Industry, Trade and Commerce may receive, at the discretion of the Chief Statistician, tapes or aggregations containing, in addition to the variables shown in published and unpublished tables, details such as the name of the vessel, its line, and its capacity in gross and net registered tons. Precise content is still under negotiation.

3. Release Policy

Although the Statistics Act does not permit the disclosure of any individual-identifiable information, subsection 16(3) of the Statistics Act specifies certain exceptions, including information relating to any carrier, which may be released with the authorization of the Chief Statistician. Carrier data, in the context of marine statistics, are considered to include information concerning the vessel and its cargo except the value of the cargo or component shipments and the names and addresses of shippers or consignees.

Pending the development of its own release policy, Revenue Canada Customs has agreed to the release of aggregated data in publications and, to the same level of detail, unpublished tables to the public and to government departments. Customs has also agreed to the release of individual-identifiable data to specified federal government departments and agencies in accordance with the normal release policy of the Transportation and Communications Division. It is the Division's policy to insist that, whenever individual-identifiable information is provided, such information be held confidential and secure, and not disclosed in any manner without Statistics Canada's permission.

4. Framework

Universe

The universe consists of all vessels entering or leaving Canadian ports in international shipping, and the cargoes which they load and unload.

International Marine Statistics

- (1) Data on all vessels in international shipping arriving at or departing from a reference port are now captured in **international marine statistics**.
- (2) A vessel, either for-hire or private, is in **international shipping** when:
 - (a) it arrives from or departs for a foreign port
or
 - (b) the cargo is loaded for or unloaded from a foreign port
or
 - (c) its registry is other than Canadian and it has no waiver from the Canadian Transport Commission to engage in coasting service.
- (3) The **reference port** is the handling port located within Canadian geographic limits. It does not necessarily coincide with the Customs Port.
- (4) **Tabular presentations** show vessel counts and associated size and cargo statistics. It is expected that vessels not engaged in water transport will be excluded from the tabulations.
- (5) Information concerning **cargo loaded** on or **unloaded** from a vessel in international shipping at a Canadian port is captured. Data are not captured on goods such as ship's stores, mail and empty containers.

- (6) The **commodity** as reported for cargo loaded or unloaded is coded to the Statistics Canada Commodity Classification (SCC); compilation is to the classification level appropriate to the total tonnage recorded for the reference period.

Sources of Information

International vessel and commodity traffic and origin-destination data are obtained from administrative documents of Revenue Canada Customs and Excise, copies of which are sent to Statistics Canada by Customs officials at the reference port or, for non-Customs ports, at the nearest Customs office. Reports used are the A 6 General Declaration and attachments such as the ship's manifest, bills of lading, an advice note or the A 6A Cargo Declaration.

Reference Period

- (1) The statistical year begins on January 1 and ends on December 31, and the date of record is the date of arrival or departure of the vessel. All documents pertaining to a year are allocated to that year, even though some are received in the following year.
- (2) Numbers of arrivals and departures do not necessarily balance, for two reasons:
 - (a) the arrival and departure of a vessel may occur in different reporting periods.
 - (b) one of an arrival-departure pair may be international and the other domestic.

CHAPTER II

DEMAND: REQUIREMENTS OF PRINCIPAL USERS

A. Demand for International Marine Statistics

Statements of requirements for international marine statistics are given, with varying degrees of emphasis, in terms of four inter-related aspects, namely: a proposed statistical system, data elements, statistical output and end use.

1. The Statistical System

Two statements of need for international marine statistics describe statistical systems. One is a proposal of the United Nations Statistical Office, the other is the 1974 report of the Interdepartmental Committee on Shipping Statistics. In addition, there is a requirement within the Transportation and Communications Division itself for a system which will complement that which produces Coastwise Shipping Statistics. Each will be described, and a composite system outlined.

(a) United Nations Statistical Office

Mr. Han-Son Chu, Adviser, Shipping Statistics to the United Nations Statistical Office, in A Paper prepared for Presentation in a Research Seminar of Canadian Transport Commission held in Ottawa, Canada on October 1981, made a detailed proposal for an "information system of maritime transport statistics for developing countries". The system described is basically national, with the capability of contributing to regional and global statistics. Through aggregation the U.N. could use data supplied by statistically sophisticated countries to provide information on traffic to and from less developed nations. It should therefore be kept in mind that information given to the United Nations will probably be distributed worldwide, with unpredictable consequences in terms of regulations, restrictions and charges for the ships whose movements are recorded.

The United Nations system consists of a set of data files linked by common elements. Basic are two active files showing data on ship movements and on commodity movements: a third file on port operations is optional. It is essential to the system that the commodity movement file retain the ship's identity, and that both the ship movements file and the commodity movements file yield data by port.

Three library files increase the power of the active files to produce data. Ship descriptors can be used to validate and supplement reported data. Commodity classification code/decode files permit aggregation of commodity data at appropriate levels of detail. A file of port-to-port distances permits the calculation of goods tonne-kilometres, thus adding another dimension to the capabilities of the systems.

The system as proposed is intended to draw most of its information requirements from existing Customs documents and supporting papers, port records and standard reference publications.

(b) Interdepartmental Committee on Shipping Statistics

In June, 1974, the Interdepartmental Committee on Shipping Statistics, set up in August 1973, made its report, entitled, Water Transport Statistics Report, Evaluation and Recommendations. Its authors envisaged six components of a Water Transport Statistics System, namely,

Vessel Operation: movements of the vessel and its load.

Cargo Movement: cargo flow and commodity U and D.

Port Activity: vessel and cargo data for each port.

Ship Registries: a static data bank containing vessel information.

Modal Split: the inland mode of transport by commodity.

Financial Data: Canadian water transport industry and activity data.

Through linkage of the various components of this framework, the system would yield a variety of data types. The last component, Financial Data, though part of the framework, was considered complementary to rather than part of shipping statistics.

(c) Transportation and Communications Division

In order to produce total port activity statistics, it is necessary to combine coastwise and international shipping data for each port handling both international and domestic shipping. Therefore, a description of the components of the Coastwise Shipping Statistics becomes relevant to the demand for international marine statistics.

The Coastwise Shipping Statistics system is presently under revision. It will combine active data files with static vessel data and commodity classification libraries. Integration with international marine statistics files is not essential as long as concepts and data elements match sufficiently well that total port activity data can be produced.

(d) Components of a Composite System

In selecting components of a Canadian International Marine Statistics System it is assumed that information about the port, other than vessel activity, is outside the terms of reference of the Working Group. Financial information on the Canadian Water Transport Industry is also out-of-scope.

For a system to satisfy the requirements of the U.N. Statistical Office, major Canadian users and the Transportation and Communications Division, it should have the following components:

Active data files

- (i) Ship movements
- (ii) Commodity movements
- (iii) Port activity file derived from (i) and (ii) above
- (iv) Country of loading or unloading

Data library files

- (i) Ship descriptors
- (ii) Commodity classification code/decode files
- (iii) Port-to-port distances
- (iv) Country names

2. Data Elements

To describe demand for international marine statistics in terms of data elements, three documents were analyzed¹. Together, they provide a representative and reasonably complete but not exhaustive list of the data elements required by the U.N. and Canadian governments, both federal and provincial. These elements may be conveniently grouped under two headings

- (a) Vessel
- (b) Shipment

1. The three documents are:

Han-Son Chu: A paper prepared for Presentation in a Research Seminar of Canadian Transport Commission held in Ottawa, Canada on October 22, 1981.

Statistics Canada: Federal and provincial government requirements for transportation statistics in Canada, 1982.

Interdepartmental Committee on Shipping Statistics: Water Transport Statistics Report, Evaluation and Recommendations, June 7, 1974.

(a) Vessel

(1) Characteristics

(i) Identifier

Name
Registration number
Flag

(ii) Size

Length
Draught
Gross Register Tons (GRT)

(iii) Capacity

Mass or Weight:

Deadweight tons (dwt)

Volume:

Net Register Tons (NRT)
Bale capacity
Grain capacity

(iv) Type

Lists vary considerably, but most are descriptive of design features, singly or in combination, along lines such as:

Types of cargo (passenger, container, tanker, bulk)
Method of loading/unloading (roll-on/roll-off, side-door)
Propulsion (steam, motor)
Design (barge, tug, hydrofoil)
Purpose (fishing, naval, ferry)

(v) Age

(vi) Ice class, strength

(2) Responsible Entity

Carrier
Owner
Operator
Shipping Line
Licensee

(3) Movement

- (i) Port of reference
- (ii) Agent
- (iii) For inbound vessels

date of arrival
last port of call
name
country or province
port of initial origin
name
country

- (iv) For outbound vessels:

date of departure
next port of call
name
country or province
port of final destination
name
country

(4) Cargo

Arriving
Discharged
Loaded
Departed
In transit
(or enough to permit calculation of all of these)
in terms of: gross weight or mass
by commodity

(5) Service

Liner
Conference
Non-conference
Bulk
Tramp
Charter
Time
Trip, Voyage
Bareboat

(6) Type of Trade

Coastal
Mackenzie
International

(7) Route

(b) Shipment

(1) Commodity

Name

Classification e.g.:

SITC (Standard International Trade Classification)

CCCN (Customs Co-operation Council Nomenclature)

(previously BTN - Brussels Tariff Nomenclature)

(2) Quantity

Mass or weight gross
 net

Volume

(3) Value

(4) Packaging

Container

Non-container

(5) Freight charges

Terms

Rate

(6) Flow

(i) Movement

Direction: Inbound, Outbound

Type: Domestic, International

Other: Transit, Feeder

(ii) Loaded Port

Province or Country

(iii) Discharged Port

Province or Country

(iv) Origin Location

Province or Country

(v) Destination Location

Province or Country

(vi) Mode(s) of Transport

Canadian origin to port of loading

Port of discharge to Canadian destination

3. Statistical Output and End Use: Requirements for Data

(1) United Nations Statistical Office

The Uniform System described by Mr. Chu envisions data collected on an individual shipment linked to the ship in which it was carried, so that statistics can be generated at will according to any desired ship characteristics. The proposal suggests that a total of 25 elements be combined, along with data libraries, to yield information at any level and for any purpose desired by the users. Each participating nation would set up its own system: these systems would be sufficiently compatible that they would contribute to regional and global aggregates and comparisons, at any agreed-upon level of detail.

(2) Canadian Transport Commission

The Canadian Transport Commission prefers to have data at vessel movement level with ship identification so that it can link to its own vessel data library file for analytical purposes related to a variety of policy and administrative decisions. As well, data at shipment or commodity level are needed for rate comparisons. Access to information, especially value of shipment, appearing on the freighted bill of lading is also required.

(3) Transport Canada

Transport Canada, in the Federal-provincial Demand document, stated a need for individual-identifiable carrier data. The information would be used for a wide range of purposes related to transportation policy.

(4) Shipping Industry

In the 1974 Water Transport Statistics Report, representatives of the shipping industry expressed a need for data by flag or line, by route, for negotiation of bilateral trade agreements.

(5) Federal and Provincial Transportation Analysts

Federal and provincial transportation analysts require detailed tabulations by commodity and such data elements as: port of loading/unloading, place of origin/destination; mode to/from port; some measure of quantity. These users, as well as port authorities, require detailed tabulations by port showing gross mass and commodity for cargo arriving, discharged, loaded, departed and in transit, by vessel characteristic such as size and type. Those analysts interested in intermodal comparisons require cargo and shipment statistics in tonne-kilometres (t.km) and origin-destination statistics with modal detail.

B. Demand for International Trade Statistics

Several international and national users of merchandise trade data have signified their interest in obtaining more complete sets of data on the flow of commodities in both inward and outward movements. Although there has been no full-scale analysis of trade demand, several recent requests relating to the marine components were made.

The **Canadian Transport Commission** has expressed interest in international general cargo traffic statistics coupled to the domestic movement of commodities (modal split). The primary data elements required to satisfy this demand are:

- (1) commodities based on C.I.T.C. and/or M.C.C. and X.C.C.
- (2) domestic origin of exports
- (3) domestic destination of imports
- (4) mode of transport in domestic movements
- (5) containerization (contents of containers)
- (6) volume
- (7) freight charges

Cargo carriers such as **Air Canada** and **CP Rail** have requested statistical information related to the air and marine components of international trade statistics; however, the object of the present study does not extend to the air segment of the statistical program. The specific data elements requested by the cargo carriers in relation to the marine component are:

- (1) commodities (C.I.T.C. and/or M.C.C. and X.C.C.)
- (2) origin and destination
- (3) weight (tonnage)
- (4) containerization (content of containers)

The **Canada - United Kingdom Freight Conference** requested that shipping weight statistics relating to Export commodity codes be gathered and verified for the purpose of publishing shipping weight for all exported cargo. Also requested by the Conference was the degree of containerization for all exported commodities.

The **United Nations** has adopted the **Harmonized System** of commodity classification. To the degree that this System is implemented for Customs purposes in Canada and throughout the world, the primary input of both Trade and International Marine statistics will be in terms of this classification. In the interest of data quality, there should be a minimum of bridging and recoding done in processing the data for publication. Since Revenue Canada Customs plans to introduce the System in 1987, the selection of appropriate commodity grouping for publication purposes is a matter of some urgency.

CHAPTER III

DEMAND VERSUS SUPPLY

In the light of the **Demand** as outlined in Chapter II, the data sources were examined to ascertain the availability of the data elements listed in that chapter. A table presented as Appendix C summarizes the sources and treatment of data in the present Marine and Trade data systems. A comparison of the known demand and supply indicated that most of the required data elements are already available either directly or from supplementary sources. In this chapter, therefore, the rationale for recommended changes to existing programs is given. These changes, if adopted, would broaden the range of user needs which could be satisfied. They are also compatible with an integrated Trade/Marine data system. A second set of recommendations dealing with the linking process itself are discussed in Chapter IV.

Customs documentation¹ is the main source of International Trade and Marine Shipping statistics. The A 6 General Declaration is the only source of information on the ship and its movements. By contrast, the data elements drawn from the Manifest in its various forms are generally available on the B 3 and other summary forms covering imports. Data concerning exports are gathered chiefly from the B 13, and from summary forms submitted by high-volume exporters and statements compiled by the Canadian Wheat Board (grain), the National Energy Board (electricity) and the Manufacturing and Primary Industries Division of Statistics Canada (crude petroleum and natural gas).

The following summary is based on a comparison of the demand as outlined in Chapter II and the supply as shown in Appendix C.

1. Vessel Characteristics

Through the vessel name as captured from the A 6, all the required vessel characteristics may be obtained from the related entry in Lloyd's Register, a standard reference which is readily available in both hard copy and tape form. Only those elements that are used for data processing or for output need be retained in the statistical system: the others can be readily accessed as required for special tabulations. The elements now in use for International Marine Transport statistics are well chosen.

Gross register tonnage (GRT) measures the space within a vessel available for all purposes. Since it is in common use as a measure of vessel size, it is an appropriate unit for statistical purposes. For port traffic statistics, a frequency distribution format is more meaningful than simple aggregation, if the traffic volume makes such a presentation practical.

(1) For a list of titles and a brief description, see Appendix B.

Net register tonnage (NRT) measures the space within a vessel available for cargo, or passenger accomodation. Since it is in volume terms, it is not directly relatable to the weight or mass of cargo. Despite this disadvantage, it is widely used as a measure of vessel capacity. For this reason, its continued use is recommended.

2. Responsible Entity

The responsible entity is subject to change more frequently than the vessel characteristics, and may even vary from voyage to voyage. For purposes of follow-up and detailed analysis, the Carrier Code appearing on Customs documentation identifies the shipping agent at the port. If necessary, the agent can provide information with regard to the owner or operator. This element is not needed in the statistical system.

3. Vessel Movement

For statistical purposes, sufficient detail on the vessel movement is captured from the A 6. However, the use of the term "ballast movement" to describe the arrival of a vessel which did not unload cargo or the departure of a vessel which did not take on cargo may be misleading to users concerned with issues such as unused capacity. Hidden in "ballast movements" are the activities of cruise ships and other passenger vessels, ferry boats whose cargo may be trucks, automobiles and persons, and tugs towing barges which do load and unload cargo. Consideration should therefore be given to the separate tabulation of movements of cargo-carrying vessels and movements of vessels carrying little or no cargo, by vessel type.

Information on type of service, type of trade and route are normally not reported on the A 6. Such details may be considered special requirements outside the scope of a statistical program.

4. Cargo

At present, only cargo discharged and cargo loaded are recorded in international marine transport statistics. Some users of vessel statistics are concerned with vessel load, rather than or in addition to loadings and unloadings. Transport Canada Coast Guard's current application, which uses the data for collision risk analysis, is only one example. To provide data on load carried into, out of or between ports, the capture of only one additional data element is necessary. That element could be any one of three: arriving load, departing load or in-transit load. Any one of these, along with loadings and unloadings, would yield the other two, since:

Arriving load - unloaded = in-transit load, and

In-transit load + loaded = departing load.

5. Shipment

The data elements discussed thus far are relevant to international marine transport statistics only. Those concerning the shipment, however, are equally applicable to international trade statistics.

Commodity data are captured in the Trade program from both import and export documentation, and in the Marine program from a variety of attachments commonly referred to as "the Manifest".

Quantity, in terms of a stated unit of measure, is also captured in both the Trade and Marine programs. In the latter, quantities are converted to kilograms either by direct calculation or through an imputation procedure.

Value is captured only for international trade statistics. For marine transport, this element is not considered to pertain to the carrier: thus it is not releasable in individual-identifiable form under the Statistics Act. Under a joint Trade/Marine program, release of at least broad aggregates could be introduced into the Marine output.

Packaging information is captured only from the Manifest. Breakdowns between containerized and non-containerized shipments are important to some users.

Country of import or export is captured in the Trade program. Port is captured in the Marine program.

Other details on freight charges and domestic transportation are captured in neither program. Customs documentation does not appear to be a feasible source for these data elements.

In summary, it would appear that, on the basis of data elements, the B 3 and other summary documents are as suitable sources of data concerning shipments for international marine statistics as the Manifest, except for determining whether or not a shipment is containerized. This is key information for those planning port facilities or examining intermodal interface. Weight or mass and foreign port, while useful, are not essential for most purposes.

CHAPTER IV

FINDINGS, RECOMMENDATIONS, IMPLICATIONS

A. Findings

The comparison of the supply and demand for Merchandise Trade/Marine Statistics has led the members of the Working Group to envisage some further developments to the present Marine and Trade data systems. The demand for Marine/Trade statistics can be satisfied almost entirely from data elements available from the present programs. However, expansion of the current system from the point of view of treatment of data would contribute further to the fulfillment of the users' expressed statistical needs.

In light of the demand for comprehensive Marine/Trade statistics, the Working Group concludes that:

- (1) since Gross Register Tonnage and Net Register Tonnage are in common use as measures of vessel size and capacity, their use in international marine transport statistics should be continued;
- (2) for a clearer presentation of port activity, consideration should be given to the separate tabulation of movements of cargo-carrying vessels and movements carrying little or no cargo, by vessel type;
- (3) to permit the provision of data on load carried into, out of or between ports, and hence the calculation of vessel load, load factors and capacity utilization, consideration should be given to the feasibility of capturing one of: arriving load, departing load or in-transit load.

B. Recommendations

Throughout the course of its study, the Working Group pursued two objectives in its quest for a link between the International Merchandise Trade and the Marine data sets:

- (i) to minimize the increase in response burden for any of the parties involved in the collection and production of integrated international trade and marine transport statistics, and
- (ii) to provide a suitable link with the least possible injection of additional resources.

It is with these objectives in mind that the members of the Working Group considered a substantial array of ways and means of linking the two data sets and made its choice of those that appeared to come closest to meeting its criteria.

Imports

The carrier number and report number reported on the A 6 General Declaration constitute portions of the cargo control number as reported on the import source documents. To link the import documents, such as the B 3 and the B 6, to the A 6 General Declaration,

1. it is recommended that the required link be established by matching the carrier and report numbers to the cargo control number provided that the incidence of duplicate numbers is deemed, after further study, to be acceptable.

The carrier and report numbers which appear on the A 6 General Declaration cannot be certified as unique numbers, thus raising the issue of possible duplicate numbers. The magnitude of this difficulty is unknown but its extent could very well determine the acceptability of the proposed approach.

2. It is recommended, therefore, that a thorough study be undertaken to determine the potential number of duplicate documents which may be generated. For the period under review, it would be essential that Transportation and Communications Division leave the carrier code unedited.

Should the results of such a study demonstrate that the number of duplicate documents is within an acceptable level of tolerance, the implementation of the automated match of source documents could then be pursued as outlined in recommendation 1. However, should the study show an unacceptable number of duplicate documents,

- 2.1 it is recommended that ways be explored to reduce duplication and, in the event that an unacceptable level of duplication still remains, that Customs be approached to provide, with each A 6 General Declaration, a complete list of relevant cargo control numbers associated with an inward movement.

The B 3 and other forms used by External Trade Division to capture import data summarize, by shipment, information shown on the Manifest and other supplementary documentation. Three data elements published in marine transport statistics appear to be missing from the B 3. These are weight or mass, a containerized code and the foreign port of loading.

For purposes of marine transport statistics, the mass for each shipment loaded or unloaded by vessels in international shipping is usually obtained from the "unit of measure" and "quantity" data shown on the Manifest. If the unit of measure is in terms of mass or weight then the conversion to kilograms is a direct calculation. If the unit is in terms of volume, number or other attribute, then a calculation is made using conversion tables. An edit check is performed for consistency against the information on the A 6. For this procedure, the records on the B 3 and other summary documents would serve equally well. The Working Group therefore:

3. recommends that an imputation scheme be used to derive the weight from the quantities specified on the import source documents.

The discontinuance of the submission of the Manifest to Statistics Canada might be possible should ways of obtaining containerization information from other sources be found.

The containerized code is entered from the Manifest by Marine staff after a visual check of the information. The code identifies shipments as "containerized" or "not containerized". Again, the records on the B 3 and supporting invoices would serve equally well. However, under the provisions of the Customs Act, the invoice is a confidential document. It is unclear whether or not specific data elements such as "containerization" can be made available for publication or other release.

4. It is, therefore, recommended that clarification be sought as to whether or not specific data elements from the invoice can be disclosed under the Customs Act, and thus under the Statistics Act.

Should it be determined that because of the confidential status of the invoice, specific data elements cannot be disclosed for publication,

- 4.1 it is recommended that discussion be initiated with the appropriate Customs authorities, to consider, in the eventuality of changes to the source documents, the inclusion of a new field of information on containerization.

Exports

As to the match of documents for outward movements (exports), consideration was first given to the manual matching of export documents (B 13 and summaries) to the A 6 General Declaration and the Manifest. The disadvantages of this approach appear to outweigh by far the advantages, inasmuch as it would be costly to implement and to maintain. Furthermore, it would require reliance on several data elements in order to establish a match of documents, thus jeopardizing its effectiveness and reliability.

Visits to ports as part of this project and for other purposes have indicated that on-site procedures exist which would facilitate the cross-reference of Marine and Trade documents. Providing that similar systems exist in all ports, then full coverage of the universe could be obtained without necessitating drastic changes to Customs' internal procedures.

5. It is therefore recommended that, by using the Customs Port reference system to link the B 13's to the corresponding A 6, an attachment to the A 6 be developed, consisting of the port identifier and a list of all entry numbers of the export documents associated with each outward movement, and that discussions be initiated to obtain Customs participation in the completion and submission of B 13 listings with the appropriate A 6.

This method would require additional work on the part of port personnel. To alleviate this potential difficulty,

- 5.1 it is recommended that for larger Canadian cities such as Vancouver, Toronto, Montreal, Halifax and St. John's, consideration be given to, and authorization obtained from all interested parties for, the use of Statistics Canada's Regional Office personnel to transcribe the relevant information (B 13's associated with an A 6) from the Customs Port reference system.

This sharing of responsibilities would be less onerous for Customs staff and still allow for the capture of all information at a minimum cost.

Some components of the export statistics program do not readily lend themselves to the suggested approach, since summaries are accepted in lieu of B 13's. Several hundred companies are permitted to submit a monthly summary. The Canadian Wheat Board and the Manufacturing and Primary Industries Division of Statistics Canada also prepare summary statements.

- 5.2 It is recommended that, for those reporting by summary, a procedure be established to match, within Statistics Canada, the summaries and the associated A 6 General Declarations. This task may require expansion of the summary format to allow for inclusion of additional data elements such as the number of shipments by mode of transport and the port of departure.

C. Implications

The members of the Working Group consider that the approaches suggested and outlined in the various recommendations will provide the required framework to link the International Trade (Imports and Exports) and the Marine source documents. However, further work and research will be required before an implementation strategy can be finalized. The remaining tasks are to:

- (1) determine the extent of duplication of carrier and report numbers on the B 3, and explore ways to reduce such duplication;
- (2) verify the existence and suitability of port reference systems for relating B 13's and the associated A 6 departure document;
- (3) develop procedures for the linking of both import and export source documents to the A 6 General Declaration;
- (4) test the procedures developed;
- (5) establish costs to be incurred for the testing of the procedures required;
- (6) recommend strategy for implementation

It is suggested that a project team be assigned, on a full-time basis, the responsibility of completing the above-mentioned tasks. Throughout the course of the work, Customs participation will form an integral element in varying degrees depending on the area of responsibility.

Appendix A
EXTERNAL TRADE DIVISION
DESCRIPTION OF PUBLICATION CONTENT

A. Monthlies, Quarterlies and Annuals

1. Preliminary Statement of Canadian Trade - Monthly

Information bulletin releasing preliminary merchandise trade figures in advance of regular External Trade publications. This release presents a textual analysis of Canadian trade on both a Customs and a Balance of Payments basis.

2. Summary of External Trade - Monthly

Summarized presentation of two-year quarterly totals of exports and imports, seasonally adjusted, by seven geographical areas and selected commodity grouping; current and previous month and three year cumulative totals by country and commodity categories; exports by province of lading and imports by province of clearance; charts, indexes of prices and volumes.

3. Exports by Countries - Quarterly

Values only of domestic exports by countries and commodity categories showing three-year figures of latest and preceding quarters together with cumulative year-to-date totals distributed by province of lading. Domestic exports to 19 census subdivisions in the U.S.A. by commodity categories and regions of lading, cumulative current year only.

4. Exports by Commodities - Monthly

Quantity and value of domestic exports showing countries to which commodity was exported, monthly figures and cumulative totals; re-exports by commodity groups by countries, and non-trade special transactions by commodities and countries.

5. Imports by Countries - Quarterly

Values only of imports by countries and commodity categories, showing three-year figures of latest and immediately preceding quarters together with cumulative totals distributed by province of clearance.

6. Imports by Commodities - Monthly

Quantity and value of imports, showing countries from which commodity was imported; monthly figures and cumulative totals, and special transactions non-trade by countries and commodities.

7. Exports, Merchandise Trade - Annual

Summary tables of exports by countries and trading areas, by sections, modes of transport and regions of lading. Detailed figures for three years of exports by commodities and countries. Domestic exports to 19 census subdivisions in the U.S.A. by commodity categories and regions of lading for latest year. Total exports by modes of transport, value and quantity by commodity group, two calendar years from 1972.

8. Imports, Merchandise Trade - Annual

Summary tables of imports by countries, by sections, free and dutiable imports and duty initially collected. Detailed figures for three years of imports by commodities and countries of free and dutiable imports and duty collected in the latest year.

9. Imports, Merchandise Trade, Commodity Detail - Annual

This report shows statistics by Canadian International Trade Classification (CITC) commodity class by country from which the goods were first consigned directly to Canada. The CITC contains some 16,000 commodity classes compared with the approximately 2,700 classes of the Import Commodity Classification (MCC) used in the monthly and annual publications.

B. Occasional

1. Trade of Canada Commodity Classification

This is a reference manual, derived from the **Standard Commodity Classification**, and intended to provide a guide to the statistical categories used in monthly, quarterly and annual Trade of Canada publications. It lists the Import and Export Commodity Classifications side-by-side and provides a brief alphabetic index, plus a conversion key for commodity time series. Also included are the condensed versions of the commodity classification that are used in summaries of import and export statistics and the list of countries or grouping of countries for which statistics are published. The last edition, June 1975, is out of print.

2. The 1971 - Based Price and Volume Indexes of Canada's External Trade. Supplement

Description of the concepts and methods applied to the 1971-based price and volume indexes of Canada's external trade. Analysis and comparison of the new indexes on a Paasche and Laspeyres basis and of the 1971-based indexes with the 1968-based indexes.

3. Canadian International Trade Classification: Reference Manual

The CITC consists of approximately 16,000 7-digit commodity-coded headings organized in a commodity classification structure compatible with the Standard Commodity Classification of Statistics Canada. The alphabetic index contains approximately 45,000 items with their commodity codes.

Appendix B

SOURCES OF INFORMATION

For Imports:

B 3: Canada Customs import entry coding form. Provides detailed information on commodities imported into Canada. Each line covers one shipment.

B 6: Canada Custom warehouse entry coding form. Similar to the B 3, this form is used when the goods are stored in a bonded warehouse at the time of entry.

Invoice: A supporting document for the B 3 and the B 6, provides additional information on the shipment. May be a commercial rather than a Customs form: format varies.

CEPACS Tapes: These are machine-readable transcriptions of import documentation (B 3, B 6) on magnetic tape produced at Customs locations with on-line access to the Cargo Entry Processing and Collection System (CEPACS). Both the tapes and the related documents are forwarded to Statistics Canada.

Automobile tapes: American Motors, Chrysler, Ford and General Motors (Big Four) submit machine-readable tapes weekly covering service parts and monthly covering production parts. Related B 3's and computer printouts are submitted with each tape.

Liquor tapes: These are machine-readable tapes containing information concerning imports of alcoholic beverages to all provinces except Newfoundland and British Columbia. Supporting documents and a computer printout accompany the tapes.

Summary Report of Company Transactions: A Monthly report from the "Big Four" auto firms, covering importations of complete vehicles into Canada.

Supplementary import documentation forms:

- B 8: Casual import entry form
- E 46: Appraisal note
- B 2R, B 2A: Amending import entry forms
- B 32: Final determination or adjustment
- T151: Perfect or voluntary amend

For Exports:

B 13: Canada Customs exports declaration.

Summary report: Summarizes the exports of a firm for a period of one month. To use this method of reporting, a firm must meet criteria established by Customs and Statistics Canada. In general, the report covers high-volume exports of a few standard commodities.

Summary statements: These are monthly compilations reporting exports of selected commodities such as wheat and energy. They are prepared by the Canadian Wheat Board, the National Energy Board and the Manufacturing and Primary Industries Division of Statistics Canada.

For Marine Transport:

A 6: General Declaration. This form is submitted to Customs by the master or agent of a vessel in international trade upon arrival in or departure from a port. It contains information concerning the vessel, its movements and cargo loaded or unloaded at the port. Customs sends copies to Statistics Canada.

Manifest: The term refers to a variety of documents attached to the A 6 which provide descriptive details on each shipment. Most of these are summarized on the B 3 in the case of imports.

Appendix C

SUPPLY: SOURCES AND TREATMENT

Data Element	Alternatives, remarks	Input			Output		
		Source: Customs Documentation		Processing	Marine	Trade	
No.		A6 M B3 B13	Derivable	Control Library	P R F	P R F	
<u>V Vessel Identifier</u>							
1 Name	Link to Lloyd's Register	R R* R*		X	X	X	
2 Registration number	Lloyd's number		V1	X	X	X	
3 Flag	Nationality, Country of Registry	R R*	V1	X	X	X	
<u>Size, capacity</u>							
4 Gross register tonnage		R	V1	X	X	X	
5 Net register tonnage		R	V1	X	X	X	

Symbols used:

General
* Incomplete
X Used as indicated

Input
C Captured
R Reported

Output
P Publication
R Requests
F Retained in file

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output		
			Derivable	Processing	Control Library	P	R	F
No.		A6 M B3 B13				P	R	F
V Vessel - concluded								
6 Deadweight tonnage	(summer)	R*	V1	X				
7 Length overall		R*	V1					
8 Draught forward		R*	V1					
9 Draught aft		R*	V1					
10 Type	See also C2		V1	X	X	X		X
11 Responsible entity	Carrier Shipping line	R*	V1	X	X	X	X	X
<u>Not on Forms</u>								
12 Age	Year built		V1					
13 Ice class, strength			V1*					
Symbols used:			Input			Output		
General			C Captured			P Publication		
* Incomplete			R Reported			R Requests		
X Used as indicated								

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output		
			A6	M	B3	Derivable	Processing Control Library	Marine P R F
No.			A6	M	B3	Derivable	Control Library	P R F
<u>M Vessel movement</u>								
1 Port of reference	Province, area	C	R*				X	X
2 Customs port	Province, area	C	C	C			X	X
3 Position of ship in port	Supplements M1	R					X	
4 Agent	Carrier code	C	R*	C			X	X
5 Ship's agent	Often same as M4	C					X	X
6 Arrival/Departure code		C					X	X
7 Date	Month, year	C		R*			X	X
8 Last, next, port of call		C					X	X
<u>Symbols used:</u>			General			Input		
			* Incomplete			C Captured		
			X Used as indicated			R Reported		
						Output		
						P Publication		
						R Requests		
						F Retained in file		

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output		
			Derivable	Control	Library	P	R	F
No.		A6 M B3 B13						
M Vessel movement concluded								
9 Other ports of call	Route	R*						
10 Service		C*		X			X	
11 Charter - flag		C					X	
12 Charter type		C					X	
13 Number of trips		C		X			X	

Symbols used:

General
* Incomplete
X Used as indicated

Input
C Captured
R Reported

Output
P Publication
R Requests
F Retained in file

Data Element	Alternatives, remarks	Input				Output		
		Source: Customs Documentation	Derivable	Processing	Marine	Trade		
No.		A6 M B3 B13	Control Library	P R F	P R F			
C Cargo loaded, unloaded								
1 No. of passengers		C		X			X	
2 Weight by type of cargo	Mass	C		X			X	
3 Total cargo weight			C2					
4 Empty containers	# converted to TEU'S (20 ft equivalent units)	C		X			X	
5 Loaded containers	# converted to TEU'S (20 ft equivalent units)	C		X			X	
6 Cargo control quantity								
Not on forms		R						
Cargo arriving								
Cargo departing								
Cargo in transit								
Type of trade			X					

Symbols used:
 General
 * Incomplete
 X Used as indicated
 Input
 C Captured
 R Reported
 Output
 P Publication
 R Requests
 F Retained in file

Data Element	Alternatives, remarks	Input			Output		
		Source: Customs Documentation	Derivable	Processing	Marine	Trade	
No.		A6 M B3 B13	Control Library	P R F	P R F	P R F	
<u>S Shipment</u>							
1	Commodity group	C C C		X	X	X	X
2	Mass in kilos						
3	Shipping weight						
4	Invoice quantity	R	S5, S6	X	X		
5	Unit of measure	C C C		X	X	X	X
6	Quantity	C C C		X	X	X	X
7	Value for duty	C					
8	Invoice value	C					

Symbols used:

General
* Incomplete
X Used as indicated

Input
C Captured
R Reported

Output
P Publication
R Requests
F Retained in file

Data Element	Alternatives, remarks	Input			Output	
		Source: Customs Documentation		Processing	Marine	Trade
No.		A6 M B3 B13	Derivable	Control Library	P R F	P R F
S Shipment - continued						
Packaging						
9 Containerized code		C		X	X	X
10 Number & types of packages		R*	R			
Freight charges						
11 Estimated freight to port			R			
12 Estimated freight to destination			R			
13 Shipping terms			R			

Symbols used:

General	Input	Output
* Incomplete	C Captured	P Publication
X Used as indicated	R Reported	R Requests
		F Retained in file

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output		
			Derivable	Processing	Marine	Trade		
No.		A6 M B3 B13		Control Library	P R F	P R F		
S Shipment continued								
<u>Flow</u>								
14 Foreign port of loading/dis-charge	Country, area	C		X	X			
15 Inland origin/destination	Province of lading Place of receipt, delivery	C*		X	X	X	X	X
16 Country of Import	Country grouping	C	X	X		X	X	X
17 Country of Origin	Country Grouping	C R	X	X		X*	X*	X*
18 Country of Export	Country Grouping	C		X		X	X	X
19 Shipper/Exporter		R*						
20 Consignee/Importer		R* R R						

Symbols used:

General
* Incomplete
X Used as indicated

Input
C Captured
R Reported

Output
P Publication
R Requests
F Retained in file

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output	
					Processing	Marine	Trade
No.		A6 M B3 B13	Derivable	Control Library	P R F	P R F	
S <u>Shipment</u> - concluded							
21 Importer No.		C					X X
22 Vendor name		R					
23 Inland mode of transport	Local carrier	R*					

Symbols used:

General
 * Incomplete
 X Used as indicated

Input
 C Captured
 R Reported

Output
 P Publication
 R Requests
 F Retained in file

Data Element	Alternatives, remarks	Input			Output		
		Source: Customs Documentation	Derivable	Processing	Marine	Trade	
No.		A6 M B3 B13	Library	P	R F	P R F	
0	<u>Other Elements</u>						
1	Transaction code	C C	X				
2	Processing month	C C C C			X X	X	
3	Sequence number	C C					
4	Report Number	C R	X		X		
5	Entry number	C C C				X X	
6	Bill of lading number	R*					
7	Container No., Seal No.	R*					
8	Marks and numbers	R*					
9	Voyage No.	R* R*					
10	Cargo Control number	C					X

Symbols used:

General	Input	Output
* Incomplete	C Captured	P Publication
X Used as indicated	R Reported	R Requests
		F Retained in file

Data Element	Alternatives, remarks	Source: Customs Documentation	Input			Output		
			Processing	Marine	Trade	Processing	Marine	Trade
No.		A6 M B3 B13	Derivable			Control Library	P R F	P R F
0 Other Elements - concluded								
11 Account/Security No.		C	X					X X
12 Export Permit No		R*						

Symbols used:

General
* Incomplete
X Used as indicated

Input
C Captured
R Reported

Output
P Publication
R Requests
F Retained in file

APPENDIX D: GLOSSARY OF TERMS

- Bale capacity (B):** in cubic metres (m³), the capacity of cargo spaces, measured to inside of cargo battens, to top of ceiling and to underside of beams, including hatchways. Insulated spaces are not included. For a part container ship, spaces allocated to containers are not included.
(capacité volumétrique en balles)
- Ballast:** heavy material placed low in ships to maintain proper stability trim (riding level) and draught. A ship is in ballast when it carries no cargo, but only ballast. In international marine statistics a ship is said to be in ballast when, for an arriving vessel, it unloads no cargo or, for a departing vessel, it has not loaded any cargo at the reference port.
- Bulk cargo:** refers to commodities that are carried loose or in mass in a ship's hold, rather than in containers or packages. They may be liquid (gasoline, milk, wine) or solid (grain, logs, ores); in general, handling consists of shovelling, pumping, blowing, scooping, forking or running through a chute or over a conveyor.
(Charge-ment en vrac)
- Canadian coastal waters:** include the waters adjacent to the Canadian Atlantic Coast; that portion of the St. Lawrence River which is east of a line drawn from Cap des Rosiers to West Point Anticosti Island and thence to the north shore of the St. Lawrence River along the meridian of longitude 63 degrees west; the waters adjacent to the mainland and islands of the Canadian Arctic; Hudson Bay and James Bay; the waters adjacent to the Canadian Pacific Coast.
- Charter (types of)** See also Charter Party.
- Bareboat:** charter of the bare ship without crew. A form of charter party in which an owner charters a vessel to a charterer for a definite period of time, to be managed by the charterer. The charterer engages the master, officers and crew; takes over full control of the ship, and employs it as if it were a unit of his own fleet.
(Affrètement coque-nue)
- Time:** a form of charter party in which an owner charters a vessel to a charterer for a specified period of time. Customarily the shipowner appoints the master and mans and provisions the vessel: remuneration is by hire money.
(Affrètement à temps)
- Voyage:** a form of charter party in which an owner charters a ship or some principal part of it for a specific journey by water. Customarily the shipowner appoints the master and mans and provisions the vessel: remuneration is by hire money.
(Affrètement au voyage)

Charter party: an agreement by which a shipowner agrees to place an entire ship, or part of it, at the disposal of an undertaking or person, for the conveyance of goods or passengers.
(contrat d'affrètement)

Coasting service: see "coastwise shipping"

Coastwise shipping: the carriage of goods and passengers by the marine mode of (cabotage) transport in Canadian coastal waters, the Great Lakes and the St. Lawrence Seaway. A vessel is classed as being in coastwise shipping when it is of Canadian Registry, sails between two Canadian ports and loads or unloads no foreign freight; or it is of foreign registry, but is granted a waiver by the Canadian Transport Commission to engage in coasting service.

Commodity Classification:

C.I.T.C.:	Canadian International Trade Classification (16,000 classes)
M.C.C.:	Import Commodity Classification (2,700 classes)
S.C.C.:	Standard Commodity Classification
S.I.T.C.:	Standard International Trade Classification
X.C.C.:	Export Commodity Classification

Conference: a shipping conference is an association of ocean carriers formed for the purpose of setting uniform or common freight rates and conditions for the transportation of goods by member carriers over a particular route or between two geographic areas.

Containerized cargo: cargo moved in specially-designed metal boxes, usually 20 or 40 feet in length, which are loaded and unloaded by crane.

CTC waiver: a temporary entry permit granted to a vessel through the Water Transport Committee of the Canadian Transport Commission.

Customs port: a location designated by Revenue Canada, Customs and Excise, for the declaration of goods.

Deadweight (dwt): the weight in tonnes (t) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

Domestic exports: include all outward movements of goods grown, extracted or manufactured in Canada.

Draught: the depth of water a ship draws or requires to float her:
(Tirant d'eau) maximum summer draught amidships in metres(m).

Feeder line: an auxiliary service between two or more ports for the mainline vessels.

Flag: indicates the country where the ship is officially
(Pavillon) registered. This is the flag or ensign flown at the ship's stern.

Geographic region
Canada:

External trade, five regions:

Atlantic (provinces of Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick)

Quebec

Ontario

Prairies (provinces of Manitoba, Saskatchewan and Alberta)

Pacific (provinces of British Columbia, Yukon and Northwest Territories)

Marine, four maritime regions:

Atlantic (includes east coast, Hudson Bay and Arctic Ocean ports)

St. Lawrence River

Great Lakes

Pacific

Foreign: Western Europe
Eastern Europe
Middle East
Other Africa
Other Asia
Oceania
South America
Central America and Antilles
North America (other than Canada)

Gross Register Tonnage: a measurement of the capacity in cubic feet of the spaces within the hull, and of the enclosed spaces above the deck available for cargo, stores, fuel, passengers and crew, with certain exceptions, divided by 100. Thus 100 cubic feet of capacity is equivalent to 1 gross register ton (GRT).

High seas movement: the flow of goods to and from off-shore locations inside or outside Canadian territorial waters (the 200 mile limit including the continental shelf). In External Trade statistics, the flow of goods between the mainland and drilling rigs is recorded as "Drilling rigs, equipment and supplies, non-trade under exports (to the rig) and imports (from the rig) as appropriate. The flow of goods between rigs and other countries is considered "trade" as are fish transfers at sea and ores originating from the High Seas. If the fish or minerals are retrieved by a Canadian-owned vessel, or if a transaction not involving a rig occurs within the 200 mile limit, the situation is considered domestic trade and not recorded. It should be noted that Revenue Canada Customs does not staff locations more than 12 miles off-shore.

In transit:

Marine: refers to goods which are neither loaded nor unloaded at a port, but remain on board; they are not recorded as shipments.

External Trade: refers to goods entering Canada en route to another country and Canadian goods re-entering Canada after moving through the United States.

Ice class, ice strength: degrees of strengthening for navigation in ice.

Grain capacity (G): in cubic metres (m^3), the capacity of cargo spaces, measured to outside of frames, to top of ceiling and to top of beams, including hatchways. Insulated spaces are not included. For a part container ship, spaces allocated to containers are not included.

Imports: include all inward-bound goods which cross Canada's geographical boundary.

International Marine Statistics: includes data on all vessels in international shipping arriving at or departing from a reference port.

International Merchandise Trade: include all goods which add to or subtract from the stock of material resources in Canada as a result of their movement across the Canadian border.

International shipping: a vessel, either for-hire or private, is in international shipping when:

- (a) it arrives from or departs for a foreign port or
- (b) the cargo is loaded for or unloaded from a foreign port or
- (c) its registry is other than Canadian and it has no waiver from the Canadian Transport Commission to engage in coasting service.

Length: the overall length of the ship.

Liner: a vessel which provides a scheduled service over a specific route; may carry cargo, passengers or both.

Lloyd's number: a seven-digit number assigned to the ship by Lloyd's Register, used for electronic data processing. It will remain unchanged during the life of the ship.

Net Register Tonnage: derived from the gross tonnage by deducting spaces (jauge nette) used for the accomodation of the master, officers, crew, navigation, propelling machinery and fuel.

Non-conference: a scheduled service over a particular route by a line not belonging to a shipping conference.

Non-liner: a vessel which carries cargo whenever required rather than according to an advertised schedule and route.

Non-trade transactions: exclusions from Trade Statistics, which consist of exports to Canadian diplomats or military posts abroad, imports by foreign diplomats or to military posts in Canada, tourist purchases and settlers' effects.

Propulsion: type of motive power used by a vessel.

Re-exports: exports of goods of foreign origin which have not been materially transformed in Canada.

The statistical month: defined as the calendar month; however, five working days are allowed by External Trade Division for the transmittal of documents from Customs.

The statistical year: for **Marine**, begins on January 1 and ends on December 31, and the date of record is the date of arrival or departure of the vessel. All documents pertaining to a year are allocated to that year, even though some are received in the following year. **External Trade** allows five working days

for the transmittal of documents from Customs, so that the statistical year begins on January 5 or 6 and ends on January 5 or 6 of the next year.

- Reference port: the handling port located within Canadian geographic limits. It does not necessarily coincide with the Customs Port.
- Roll on/roll off: cargo on wheels that may be loaded or unloaded under its own power or pulled or pushed by mechanical means; also refers to freighters designed to handle such cargo. Vehicles are driven on or off; containers or other cargo are on trailers, rail cars or other mobile equipment.
- Tramp: a freight vessel which provides an unscheduled service as required by shippers on either a charter or a rate per unit. Cargo usually consists of bulky commodities not requiring vessels of special design.
- Trans-shipment: refers to goods coming into Canada en route to another country.
- Transit port: a port where goods are transferred to other vessels for onward transmission.
- Total exports: the sum of domestic exports and re-exports.
- Value: for **exports**, that declared on the export documents, which usually reflects the actual selling price. For **imports**, it is generally the value established for Customs duty purposes, which for most arms-length transactions is identical to the selling price.